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Translation

PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PA1667WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/003789	International filing date (day/month/year) 18 décembre 2003 (18.12.2003)	Priority date (day/month/year) 18 décembre 2002 (18.12.2002)
International Patent Classification (IPC) or national classification and IPC B81C 1/00, B81B 3/00		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 28 juillet 2004 (28.07.2004)	Date of completion of this report 19 May 2005 (19.05.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

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I. Basis of the report

1. This report has been drawn on the basis of (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):

☐ the international application as originally filed.

☒ the description, pages 1-11, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.

☒ the claims, Nos. 1-7, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. _____, filed with the letter of _____,
 Nos. _____, filed with the letter of _____.

☒ the drawings, sheets/fig 1/5-5/5, as originally filed,
 sheets/fig _____, filed with the demand,
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 7	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 7	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

2. Citations and explanations

Technical field

The invention concerns a method for producing an integrated microsystem comprising a suspended planar microstructure, using a sacrificial layer made of a polymeric material.

Closest prior art

Document US-A-2002/0047172 describes a method corresponding to the preamble of claim 1, the method comprising a step of depositing a layer for forming a suspended structure on the sacrificial layer and etching an opening in the forming layer in order to remove the sacrificial layer. The suspended structure is secured to the substrate, the securing layer being planarised at the same level as the sacrificial layer.

Problem

The problem is that of preventing a lateral movement of the sacrificial layer during the subsequent annealing steps and to provide a sacrificial layer without planarisation defects.

Solution

The solution is supplied by the characterising portion of

claim 1 and resides in the fact that the securing layer is an embedding layer arranged in such a way as to encompass the sacrificial layer. After the planarisation step, the the sacrificial layer and the embedding layer form a joint planar surface without tears.

Assessment

Neither the specific problem solved by the invention nor the solution indicated in claim 1 are known or suggested by the available prior art. The subject matter of claim 1 is therefore novel and inventive.